DETAILED ACTION

Response to Remark

1. This communication is considered fully responsive to the amendment filed on 09/16/11.

a. No claims have been amended.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 8-13, 18-23, and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garahi et al. (US 2003/0035437, "Garahi") in view of Schmidt (US 7,058,040, "Schmidt").

Regarding claim 1, Garahi discloses a method for providing communication in a multi-band multi-protocol hybrid wired/wireless network, the method comprising:

- determining by an access point, a protocol associated with a communication signal for the access point (AP) (access point selects a protocol to support multiple wireless protocols, see abstract and ¶.20; Intelligent Access Point (IAP) uses IEEE 802.11a, 802.11b, and 802.11 g, see ¶.43) and;

- processing the communication signal by a processor within the access point (processor in AP, see 136 fig.2, 136-1 fig.3, ¶.36, and ¶.39).

Garahi discloses that IAP may use low power schemes for short range network connections, such as those presented in IEEE standards 802.11a, 802.11b, and 802.11g (see ¶.43), but does not explicitly disclose "allocating, based on the determined protocol,

a processor within the access point, the processor compatible with the determined protocol."

However, Schmidt discloses a plurality of CPUs and a plurality of digital signal processors (DSPs) in a communication device (151 and 153 fig.2A) and the processors 151 and 153 can be configured to operate optimally on specific problems (see col.5, lns.51-57)." A DSP is a specialized microprocessor with an optimized architecture for the fast operational needs of digital signal processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to simply combine a plurality of DSPs as taught by Schmidt with the access point of Garahi and to apply the method of allocating one of the DSPs as taught by Schmidt into the access point of Garahi, so that it provides a way of having embedded functions in the DSP since DSP is a special-purpose processor used for digital signal processing applications for specific problems/tasks such as implementing the determined protocol by the access point (Garahi, see ¶.43; Schmidt, see col.5, lns.51-57).

Regarding claim 2, Garahi is silent on "selecting the allocated processor from a pool of available processors for the processing of the communication signal." However, Schmidt discloses a pool of available processors such as MIPS processor and/or one or more digital signal processors (DSPs) which are configured to operate optimally on specific problems (see col.5, ln.51-59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply the method of allocating/assigning a specific processor among the processors as taught by Schmidt into the system of Garahi. The

motivation is to operate on specific problem optimally and efficiently. For example, the bank of DSPs can be optimized to handle discrete cosine transforms (Schmidt, see col.5, lines 59-66), whereas one of the processors can be used to handle other specific operation such as operating for one of the selected IEEE 802.11 protocols.

Regarding claim 3, Garahi discloses “the allocating further comprises updating the processor to be capable of the processing of the communication signal (updating to be adapted to transmit and receive communication signals, see abstract and ¶.22).”

Regarding claim 8, Garahi discloses "tuning at least one transceiver device to at least one transceiver device to at least one of a receive and a transmit frequency associated with the communication signal (see 134-1 & 134-2 fig.3; processing signals, see 136 fig.2, 136-1 fig.3, ¶.36, and ¶.39).”

Regarding claim 9, Garahi is silent on what Schmidt discloses “the processor is a digital signal processor (DSP) (153 fig.2A and col.5, ln.51-56).” Therefore, this claim is rejected with the similar reasons and motivation set forth in the rejection of claim 1.

Regarding claim 10, Garahi discloses “the protocol is one of an 802.11a, 802.11b, 802.11g and Bluetooth protocol (¶.43).”

Regarding claim 11, it is a non-transitory computer-readable medium claim corresponding to the method claim 1, except the limitation of “computer-readable medium (processor, see 136 fig.1; and inherent to a memory to store protocols within

IAP, see ¶.43) and is therefore rejected for the similar reasons set forth in the rejection of claim 1.

Regarding claims 12-13 and 18-20, they are claims corresponding to claims 2-3 & 8-10, respectively and are therefore rejected for the similar reasons set forth in the rejection of the claims.

Regarding claim 21, it is a system claim corresponding to the method claim 1 and 2 and is therefore rejected for the similar reasons set forth in the rejection of the claims 1 and 2.

Regarding claims 22-23 and 28-30, they are claims corresponding to claims 2-3 & 8-10, respectively and are therefore rejected for the similar reasons set forth in the rejection of the claims.

Regarding claim 31, Garahi discloses “the at least one integrated transceiver utilizes a single protocol stack for processing the communication signal for the 802.11a, 802.11b, and 802.11g protocols (see ¶.43)", but Garahi is silent on what Schmidt discloses “Bluetooth protocol (col.1, ln.31).”

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include Bluetooth protocol as taught by Schmidt into the stack of Garahi, so that it provides a way of providing more options for clients looking Bluetooth technology which is available at the time of invention.

4. Claims 4-7, 14-17, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garahi in view of Schmidt and further in view of Fry et al. (US 6,810,409, "Fry").

Regarding claim 4, Garahi and Schmidt are silent on "updating further comprises downloading protocol code compatible with the determined protocol to the processor." However, Fry discloses "downloading protocol code compatible with the determined protocol to the processor (download protocol code from protocol server, see col.12, lns.62-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply the method of downloading protocol as taught by Fry into the system of Garahi and Schmidt, so that it provides a way of doing any protocol processing for a specific protocol (Garahi, see ¶.43; Fry, see col.12, lns.58-63).

Regarding claim 5, Garahi discloses "storing the compatible protocol code in a memory (it is inherent to save the protocol code in a memory, otherwise, it is not operable, see ¶.43)."

Regarding claim 6, Garahi is silent on "the downloading further comprises retrieving the compatible protocol code from a portion of the memory." However, there are memories in the system of Schmidt (see fig.2A).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to retrieve/read protocol code from a portion of the memory as taught by Schmidt into the system of Garahi in order to get code for operating for a specific task.

Regarding claim 7, Garahi is silent on “associating the determined protocol code with the portion of the memory.” However, there are memories in the system of Schmidt (see fig.2A). Therefore, this claim is rejected with the similar reasons and motivation set forth in the rejection of claim 6.

Regarding claims 14-17 and 24-27, they are claims corresponding to claims 4-7 & 4-7, respectively and are therefore rejected for the similar reasons set forth in the rejection of the claims.

Response to Arguments

5. Applicant's arguments filed have been fully considered but they are not persuasive.

At pages 12-17, with respect to claim 1, applicant argues that Garahi and Schmidt fail to disclose “allocating, based on the determined protocol, a processor within the access point, the processor compatible with the determined protocol” by stating "what Garahi does not disclose is not simply allocating of DSPs, but allocating of at least one processor based on a previously determined protocol."

In reply, Garahi explicitly discloses the method of supporting multiple wireless communication protocols and allowing access via one protocol and providing backhaul service using different protocols as described in abstract and paragraph [0020]. That is, Garahi discloses the method of selecting one of protocols supported in wireless access point. Schmidt discloses the deficiency of Garahi that a plurality of CPUs and a plurality of digital signal processors (DSPs) in a communication device 151 & 153 and the processors 151 and 153 can be configured to operate optimally on specific problems. The reconfigurable processor core 150 has a bank of efficient processors 151 and a

bank of DSPs with embedded functions. These processors 151 and 153 can be configured to operate optimally on specific problems as described in col.5, lines 51-57.

A communications protocol is a system of digital message formats and rules for exchanging those messages in or between computing systems and in telecommunications. A protocol may have a formal description and can be implemented as hardware or software or both.

A DSP is a specialized microprocessor with an optimized architecture for the fast operational needs of digital signal processing.

Therefore, an ordinary person in the art simply combine the method of allocating one of the DSPs for a specific protocol as taught by Schmidt with the method of selecting one of protocols of Garahi, so that it provides a way of having embedded functions in the DSP since DSP is a special-purpose processor used for digital signal processing applications for specific problems/tasks such as implementing the determined protocol by the access point. Therefore, the examiner respectively disagrees.

At pages 18-19, with respect to claim 2, applicant argues that the combination of Garahi and Schmidt fails to disclose "selecting the allocated processor from a pool of available processors for the processing of the communication signal."

In reply, Schmidt discloses a pool of available processors such as MIPS processor and/or one or more digital signal processors (DSPs) which are configured to operate optimally on specific problems as described in col.5, lines 51-59. The reconfigurable processor core 150 has a bank of efficient processors 151 and a bank of

DSPs with embedded functions. These processors 151 and 153 can be configured to operate optimally on specific problems as described in col.5, lines 51-57.

A DSP is a specialized microprocessor with an optimized architecture for the fast operational needs of digital signal processing.

Therefore, ordinary skill in the art applies the method of allocating/assigning a specific processor among the processors as taught by Schmidt into the system of Garahi. The motivation is to operate on specific problem optimally and efficiently. For example, the bank of DSPs can be optimized to handle discrete cosine transforms, whereas one of the processors can be used to handle other specific operation such as operating for one of the selected IEEE 802.11 protocols. Therefore, the examiner respectively disagrees.

At page 20, with respect to claim 3, applicant argues that Garahi fails to disclose "updating the processor to be capable of the processing of the communication signal."

In reply, the limitations "updating the processor to be capable of the processing of the communication signal" reads on "the mobile access point is adapted to transmit and receive communications signals" as described in abstract and paragraph [0022]. That is, Garahi discloses the method of updating processor to be adapted to transmit and receive communication signals. However, if the processor or DSP is not for the communication signal or other function, Schmidt discloses the method of selecting one of processors for the specific function as described in col.5, lines 51-59. Therefore, the examiner respectively disagrees.

Conclusion

6. ***Examiner's Note:*** Examiner has cited particular columns and line numbers, or paragraphs in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung Park whose telephone number is 571-272-8565. The examiner can normally be reached on Mon-Fri during 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jung Park/

Primary Examiner, Art Unit 2465